**Task : Create a regression analysis tool for data analysis and forecasting**

**Task in context: Create an Application that performs linear regression analysis on a set of data for selling prices of houses**

**What is regression analysis?**

> Understanding how the typical value of the dependent variable changes when any one of the independent variables is varied, while the other independent variables are held fixed.

> It is also used to forecast the dependent variable in the future based on past values of the dependent and independent variables

**What is an independent variable?**

Variables we change, control or manipulate to measure the effects on the DV.

**Independent variables in context**

> No. of bathrooms

> Area of the site (1000’s square feet)

> Size of living space (1000’s square feet)

> No. of Garages

> No. of rooms

> No of bedrooms

> Age of property (years)

**What is a dependent variable?**

The outcome after changing the the IV.

**Dependent variable in context**

The selling price of the house (£100 000’s)

**How to perform Regression analysis**

Collect observations/data

The line of best fit that crosses (x bar,y bar) is the regression line

Start at 9:00, then skip to 18:00, the skip to when he starts coding <https://www.youtube.com/watch?v=E5RjzSK0fvY>

<https://towardsdatascience.com/selecting-the-best-machine-learning-algorithm-for-your-regression-problem-20c330bad4ef>

**Additional notes**

> Regression analysis is based on several strong assumptions about the variables being estimated. Remember to include any assumptions here

> Employers are a *Machine learning Forecasting* group. Therefore some type of machine learning must be used to forecast data.

> Purpose of using Machine learning is to minimise errors